

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date  
22 September 2005 (22.09.2005)

PCT

(10) International Publication Number  
**WO 2005/087046 A1**

(51) International Patent Classification<sup>7</sup>: **A46B 9/04**

(21) International Application Number:

PCT/KR2004/000799

(22) International Filing Date: 7 April 2004 (07.04.2004)

(25) Filing Language: Korean

(26) Publication Language: English

(30) Priority Data:  
10-2004-0017571 16 March 2004 (16.03.2004) KR

(71) Applicant (for all designated States except US): **BEST WHASUNG CO. LTD. [KR/KR]; 995-1 Sangjisuk-ri, Gyoha-Myun, Paju, Gyunggi-do 413-836 (KR).**

(71) Applicant and

(72) Inventor: **KWON, Young-Jun [KR/KR]; 4-7 Yadang-ri, Gyoha-myun, Paju, Gyunggi-do 413-835 (KR).**

(74) Agent: **PARK, Hee-Seop; #503, Seongji Heights 3, 642-6 Yeoksam-dong, Kangnam-gu, Seoul 135-717 (KR).**

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

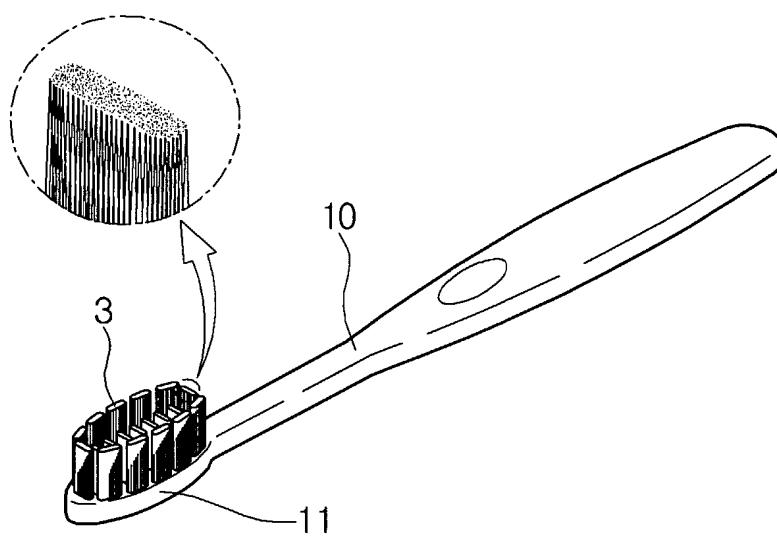
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Published:**

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: **FUNCTIONAL TOOTHBRUSH**



(57) **Abstract:** The present invention provides a functional toothbrush which enhances both the penetration into gaps between teeth and the efficiency of brushing tooth surfaces. The functional toothbrush includes rows which each have needle-shaped bristles (3) set in a longitudinally elongate groove (1) and which are longitudinally arranged along an outer edge of a head part (11) of a toothbrush body (10). The functional toothbrush further includes other rows which each have needle-shaped bristles (3) set in a latitudinally elongate groove (1') and which are longitudinally arranged on a central portion of the head part (11) of the toothbrush body (10). A length of each of the needle-shaped bristles (3) set in the outer edge of the head part (11) is longer than a length of each of the needle-shaped bristles (3) set in the central portion of the head part (11) by 1.5-3.5mm. Each of the elongate grooves (1, 1') has an elliptical shape.